

ABSTRACT OF THE DISCLOSURE

A continuous ceramic composite plating apparatus for producing long doctor materials having pinch rollers for continuously straightening out long doctor materials plated from a take-up reel(s) by a method comprising a degreasing step, rinsing step, acid immersion, rinsing step, electroless ceramic composite nickel plating step, plating solution collection step, rinsing step, and drying step between a first step of supplying continuously the long doctor blade base materials held on the reels spirally while the blade surface is maintained in a horizontal direction with respect to the surface of the solution for uniformly plating the long doctor blade material wherein a higher concentration of a ceramic fine powder is deposited on a top surface of the long doctor blade material, and a final step of taking up continuously the blade base material(s) on the corresponding take-up reel(s); and a straightening furnace for baking through which the straightened plated blades pass.

POLAROID CORPORATION

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The present invention relates to a continuous ceramic composite plating method for long doctor base materials which comprises a degreasing step, rinsing step, acid immersion step, rinsing step, electroless ceramic composite nickel plating step, plating solution collection step, rinsing step, and drying step between a first step of supplying continuously one or a plurality of long doctor blade base materials held on one or a plurality of material reels spirally while the blade surfaces are maintained in a horizontal direction with respect to the surface of a solution and a predetermined interval therebetween is maintained and a final step of taking up continuously the one or plurality of blade base materials on a plurality of corresponding take-up reels while the one or plurality of blade base materials are cramped by a plurality of pinch rolls, as well as to an apparatus therefor.

According to the present invention, the doctor blades can be plated continuously and efficiently. The obtained product is not curled and has abrasion resistance and durability because ceramic fine powder are deposited on the effective surface of the blade efficiently in a high concentration. Since no spacer is used, the blade has good outer appearance and excellent corrosion prevention properties.